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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/769,817 | 02/03/2004 | Takaaki Negoro | R2180.0189/P189 | 9540 |
| 24998 | 7590 | 06/29/2006 | EXAMINER | |
| DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP | | | SOWARD, IDA M | |
| 2101 L Street, NW | | | ART UNIT | |
| Washington, DC 20037 | | | PAPER NUMBER | |
| | | | 2822 | |

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/769,817 | Applicant(s) NEGORO ET AL. | |
| | Examiner Ida M. Soward | Art Unit 2822 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2006.
 2a) ☐ This action is FINAL. 2b) ☐ This action is non-final.
 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
 4a) Of the above claim(s) 22 is/are withdrawn from consideration.
 5) ☒ Claim(s) 1-21 and 23 is/are allowed.
 6) ☐ Claim(s) _____ is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.
 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) ☐ Notice of Informal Patent Application (PTO-152)
 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to the Applicants' amendment filed March 28, 2006.

Election/Restrictions

This application is in condition for allowance except for the presence of claim 22 directed to an invention non-elected with traverse in the reply filed on May 3, 2005. Applicant is given ONE MONTH or THIRTY DAYS from the date of this letter, whichever is longer, to cancel the noted claims or take other appropriate action (37 CFR 1.144). Failure to take action during this period will be treated as authorization to cancel the noted claims by Examiner's Amendment and pass the case to issue. Extensions of time under 37 CFR 1.136(a) will not be permitted since this application will be passed to issue.

The prosecution of this case is closed except for consideration of the above matter.

Allowable Subject Matter

Claims 1-21 and 23 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art of record does not disclose, make obvious, or otherwise suggest the structure of the applicant's together with the other limitations of the independent claims, such as:

In claim 1, "a CMOS transistor disposed on the P-type semiconductor substrate and including a P-channel MOS transistor formed in an N-type region formed in the P-type semiconductor substrate on the main surface of the P-type semiconductor substrate and an N-channel MOS transistor formed in a P-type region formed in the P-type semiconductor substrate on the main surface of the P-type semiconductor substrate, the P-type region being electrically isolated from the P-type semiconductor substrate by the N-type region;

In claim 8, "a CMOS transistor disposed on the N-type semiconductor substrate and including an N-channel MOS transistor formed in a P-type region formed in the N-type semiconductor substrate on the main surface of the N-type semiconductor substrate and a P-channel MOS transistor formed in an N-type region formed in the N-type semiconductor substrate on the main surface of the N-type semiconductor substrate, the N-type region being electrically isolated from the N-type semiconductor substrate by the P-type region;

In claim 15, "a controller including a CMOS transistor disposed on the P-type semiconductor substrate and including a P-channel MOS transistor formed in an N-type region formed in the P-type semiconductor substrate on the main surface of the P-type semiconductor substrate and an N-channel MOS transistor formed in a P-type region formed in the P-type semiconductor substrate on the main surface of the P-type semiconductor substrate, the P-type region being electrically isolated from the P-type semiconductor substrate by the N-type region, wherein the controller is configured to

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compare an output voltage from the output transistor with a reference voltage and provide feedback such that the output voltage remains constant"; and

In claim 23, "a CMOS transistor disposed on the first-polarity-type semiconductor substrate and including a first-polarity-channel MOS transistor formed in a second-polarity-type region formed in the first-polarity-type semiconductor substrate on the main surface of the first-polarity-type semiconductor substrate and a second-polarity-channel MOS transistor formed in a first-polarity-type region formed in the first-polarity-type semiconductor substrate on the main surface of the first-polarity-type semiconductor substrate, the first-polarity-type region being electrically isolated from the first-polarity-type semiconductor substrate by the second-polarity-type region".

The dependent claims being further limiting and definite are also allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to DMOS CMOS structures:

Bertotti et al. (4,887,142)

Huie et al. (5,045,492)

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Jang (US 6,392,275 B1)

Polce et al. (US 6,696,707 B2)

Shirai et al. (4,878,096).

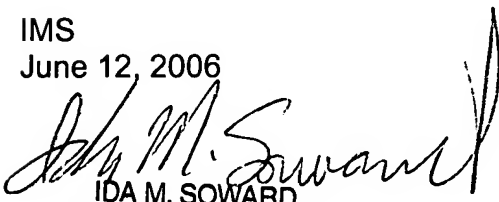
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ida M. Soward whose telephone number is 571-272-1845. The examiner can normally be reached on Monday - Thursday 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra V. Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

IMS

June 12, 2006



IDA M. SOWARD
PRIMARY EXAMINER